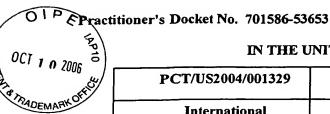
**PATENT** 



## IN THE UNITED STATES RECEIVING OFFICE

PCT/US2004/001329	16.01.2004 16 January 2004	17.01.2003 17 January 2003
International	International	International Earliest
Application Number	Filing Date	Priority Date

TITLE OF INVENTION:

HAPLOTYPE ANALYSIS

APPLICANT(S) FOR EO/DO:

The Trustees of Boston University

**INVENTOR(S)/APPLICANT(S) FOR US:** 

Charles R. Cantor and Chunming Ding

U.S.S.N. 10/542,043

#### CERTIFICATE OF MAILING

I hereby certify that this correspondence, on the date shown below, is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner of Patents, Box 1450, Alexandria, VA 22313-1450.

Date: Lely 21, 2006

Tina-Michelle Pittslev

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir/Madam:

## INFORMATION DISCLOSURE STATEMENT

In accordance with the provisions of 37 C.F.R. §1.56, 1.97, and 1.98, Applicants wish to bring to the Examiner's attention the following references, References 1-36 cited in the attached Form PTO/SB/08 a and b.

#### **REMARKS**

In accordance with the provisions of 37 C.F.R. §1.97, this statement is being filed:

<u>\_x</u>

(1) within three (3) months of the Filing Date or before the mailing date of the First Office Action on the merits; or

	(2) within three months of the mailing date of the PCT International Search Report; or
	(3) after the period defined in (1) but before the mailing date of a <b>Final Rejection</b> or <b>Notice of Allowance</b> , and the requisite Certification or fee under Rule 1.17(p), namely \$180.00, is included herein; or
_	(4) after the mailing date of a Final Rejection or Notice of Allowance but before the payment of the Issue Fee, and the requisite Certification, petition, and petition fee are included herein.
<u>X</u>	A copy of the International Search Report is enclosed herewith.
	It is respectfully requested that each of the documents shown on the attached form(s)
	PTO/SB/08a and b be made of record in this application.
	Copies of these documents (CHECK ONE):
X	are enclosed herewith that have not been previously submitted; or
	have been cited in the parent application, and are thus not being resubmitted herein.
<u>x</u> '	Pursuant to 37 C.F.R. §1.98, copies of issued U.S. patents listed on the attached form PTO/SB/08, if any, are no longer required and therefore are not enclosed. These documents can be found in the U.S. PTO issued patents database.

# FEE AUTHORIZATION

The Commissioner is authorized to charge fee deficiencies or credit overpayments associated with this submission to the Nixon Peabody LLP Deposit Account No. 19-2380.

Date: July 26, 2006

Respectfully submitted.

Ronald I. Eisenstein (Reg. No. 30,628)

Leena H. Karttunen (L0207) NIXON PEABODY LLP

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Boston, MA 02110-2131

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PTO/SB/08A (10-01)

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	3	CLARK	A G	Mol Riol F	Evol. 7(2):111-	122 (100)	2)				
	'	CD/IIde,	л.о.,	MOI. DIOI. L	.voi. /(2).111-	122 (1990	0)				
	4	COLLIN	S et al	Science 27	8(5343):1580-	1581 (19	97)			+	
	j '			.,	0(00.0).1000		.,				
	5	CONNER	et al.	, Proc. Natl.	Acad. Sci. US	A 80:278	-282 (1983)				
		1					` ,		•		
	6	DALY et	al., No	ture Geneti	cs 29:229-232	(2001)					
	7	DING et a	ıl., PN	AS 100(13):	7449-7453 (20	03)		•			
			-	` '	•	•					
	8	DOUGLA	S et a	l., Nature G	enetics 28:361	-364 (200	01)				
Examiner						Date					

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Signature

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). <sup>3</sup> See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>3</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO INFORMATION DISCLOSURE			Complete if Known  Application Number 10/542,043				
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~		as many sheets as necessary)	First Named Inventor	Cantor et al.			
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		OTHER PRIOR AR	T – NON PATENT LITERATUR	E DOCUMENTS			
Examiner Initials	Cite No.1	item (book, magazine, journ		e article (when appropriate), title of the date, page(s), volume-issue number(s), published.	T² .		
	9	DRYSDALE et al., Proc. No.	ntl. Acad. Sci. USA 97(19)	:10483-10488 (2000)			
	10	EVANS et al, Science 286:41	87-491 (1999)				
	11	GABRIEL et al., Science 296	5:2225-2229 (2002)				
	12	GRUPE et al., Science 292:1	915-1918 (2001)				
	13	HIRSCHHORN et al., Genet	ics in Medicine 4(2):45-6	1 (2002)			
	14	HODGE et al., Nature Genet	ics 21:360-361 (1999)				
	15	JEFFREYS et al., Cell 60:473	3-485 (1990)	-			
	16	JEFFREYS et al., Nucleic Ac	ids Res. 16(23):10953-10	971 (1988)			
· · ·	17	JUDSON et al., Pharmacogen	nomics 1(1):15-26 (2000)	)			
	18	KRUGLYAK, L., Nature Ger	netics 22:139-144 (1999)				
	19	KRYNETSKI & EVANS, Am	. J. Hum. Genet. 63:11-1	6 (1998)			
	20	MARTIN et al., Genomics 63:	7-12 (2000)				
	21	MICHALATOS-BELOIN et a	ıl., Nucleic Acids Res. 24	(23):4841-4843 (1996)			
	22	NICKERSON et al., Proc. Nat	l. Acad. Sci. USA 87:892	23-8927 (1990)			
xaminer				Date Considered	l		

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is

PTO/SB/08B (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
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		<del></del>	OTHER PRIOR A	RT – NON PATENT LITERATUR	E DOCUMENTS			
Examiner Initials	No.							
	23	ORITA et a	l., Proc. Natl. Ac	cad. Sci. USA 86:2766-277	70 (1989)	· -		
	24	PAPADOPO	OULOS et al., N	lature Genetics 11:99-102	(1995)			
	25	PRIOR et al.	., Human Mutat	ion 5:263-268 (1995)				
	26	REIN et al.,	Nucleic Acids R	Res. 26(10):2255-2264 (199	98)			
	27	ROSS et al.,	Nature Biotech	nology 16:1347-1351 (199	98)			
	28	RUANO et a	l., Nucleic Acid	's Res. 17(20):8392 (1989)	)			
	29	RUANO et a	l., Nucleic Acid	's Res. 19(24):6877-6882 (	[1991]			
	30	RUANO et al	l., Proc. Natl. A	cad. Sci. USA 87:6296-63	00 (1990)	<del></del>		
	31	SHIELDS& I	HARRIS, J. Cli	n.l Oncol. 18(11):2309-23	315 (2000)			
	32	STEPHENS 6	et al., Am. J. Hu	m. Genet. 46:1149-1155 (	(1990)			
	33	STEPHENS e	et al., Am. J. Hu	m. Genet. 68:978-989 (20	001)			
	34	TEMPLETON		s 120:1145-1154 (1988)				
	35	WOOLLEY e	t al., <i>Nature Bio</i>	otechnology 18:760-763 (2	2000)			
	36	ZHANG et al.,	, Am. J. Hum. C	Genet. 69:904-914 (2001)				
Examiner					Date Considered	T		

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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